

9PLIT

Date: 12/21/2006 12:02:21 PM  
 Location:

# Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SHORT STEP ASSEMBLY  
 Job Number : 30069 Estimate Number : 11999  
 P.O. Number : N/A Part Number : D350591122  
 This Issue : 12/21/2006 S.O. No. : N/A Drawing Number : D2351 REV E  
 Prsht Rev. : NC Project Number : N/A  
 First Issue : N/A Type : LARGE FAB ASSY Drawing Revision : E  
 Previous Run : 28760 Material : N/A  
 Due Date : 1/20/2007 Qty: 4 Um: Each  
 Written By :  
 Checked & Approved By :  
 Comment : Est Rev:E 02.10.21 Re-format; Incorporated D2351-041 IPP K J/RF

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D350-591-122 CHG003

2.0 D2244116 Step Extrusion



Comment: Qty.: 0.5000 Each(s)/Unit Total : 2.5000 Each(s)

Pick:

Qty Part Number Description Batch

0.5 D2244-128 Extrusion

B23404 x 3

B28216 x 2 Rework

B28216 x 2 FF 07-02-28

(USE ALL BATCHES FOR TRACEABILITY)

3.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2244-128 extrusion to 55.32" long as per Dwg D2351 using cutting table setup DT8185-G

FF 07-02-28

2-Drill extrusion per Dwg D2351 using Jig DT8230 for rivets.

FF 07-02-28

4.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/03/05 (S)

5.0 BENDING BENDING MACHINE



Comment: BENDING MACHINE

Bend as per dwg

DA/EL

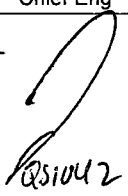
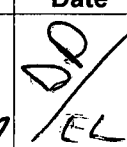

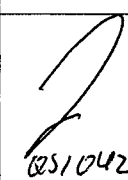

07/03/05

(PTO)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA:   A   Date: 07.08.15

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07/03/12	5.0	<del>Scrap</del> over bent 6 scrap; too short : over bent.	 QS1042	- destroy, replace - Modified bend program (6 scrap)	 EL	 07/03/12	 QS1042	 07/03/12

NOTE: Date & initial all entries

Date: Thursday, 12/21/2006 12:02:21 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 30069

Part Number: D350591122

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

DP 2-4-3 (2) 11/07/03/12 (3)

7.0

D28502

End Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total: 5.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2850-2 End Bracket 310952

PE 07.04.04

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Bevel Fwd and Aft end for welding

2-Weld Aft End Bracket per QSI 004 & Dwg D2351 using Welding Jig DT8033

A/R Aluminum Rod M100237  
M102225

3-Do not Grind Flush

PE 07.04.04  
PE 07.04.04  
PE 07.04.04

9.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

11/07/04/04 (4)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

10/20/04

(KIC)

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

U.M 07.02.17

12.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

PE 07.07.22

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Thursday, 12/21/2006 12:02:21 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 30069

Part Number: D350591122

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

D2582

Hi-Skid Step Leg Ass'y



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2582 Step Leg Assy ~~329922~~

~~330813~~

*SE. 07.07.23 4*

14.0

MS20600AD4W3

Cherry Rivets



Comment: Qty.: 16.0000 Each(s)/Unit Total : 80.0000 Each(s)

Pick:

Qty Part Number Description Batch

16 MS20600AD4W3 Rivet ~~B74393~~

~~M102929~~

*SE. 07.07.23 4*

15.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Rivet Leg Assembly as per Dwg D2351

*SE. 07.07.23 4*

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*SE 07/07/23 (74)*

17.0

D267334

End Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2673-34 End Plate ~~325396~~ ~~332404~~

*SE. 07.07.23 4*

18.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld Fwd End Plate per QSI 004 & Dwg D2351

A/R Aluminum Rod ~~M103794~~

~~M103794~~

2-Grind end plate flush.

*G.M.*

*SE. 07.07.23 4*  
*07.07.25 SE. 07. 4*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 12/21/2006 12:02:21 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 30069

Part Number: D350591122

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

19.0	QC9	VISUAL WELDING INSPECTION
------	-----	---------------------------



Comment: VISUAL WELDING INSPECTION

PD 07-07-25 (11)

20.0	QC5	INSPECT WORK TO CURRENT STEP
------	-----	------------------------------



Comment: INSPECT WORK TO CURRENT STEP

Er 07/07/25 (14)

21.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
------	-----------------	----------------------------



Comment: HAND FINISHING RESOURCE #1  
Touch up Alodine

BR

07-08-02 (14)

22.0	POWDER COATING	POWDER COATING
------	----------------	----------------



Comment: POWDER COATING  
Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M 105068 m-1  
BR

07/08/13 (14)  
07-08-02

(P70)

23.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
------	-----------------	----------------------------



Comment: HAND FINISHING RESOURCE #1  
Wing Walk per Dwg D2351 and QSI 005 4.4  
Batch: m104942

FL 07/08/14 (14)

24.0	QC3	INSPECT POWDER COAT/CHEMICAL CONVERSION
------	-----	---



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

Er 07/08/14 (14)

25.0	PACKAGING 1	PACKAGING RESOURCE #1
------	-------------	-----------------------



Comment: PACKAGING RESOURCE #1  
Pick Packing Kit

26.0	D22301	Mounting Lug
------	--------	--------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)

Pick:

Packing Kit	Qty	Part Number	Description	Batch
1	D2230-1	Mounting Lug	32163	


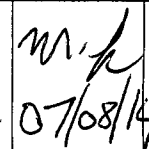


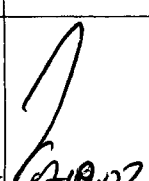
7/8/14 SP

(14)

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ **NCR:** 200 Yes No DQA: 11 Date: 07.08.15  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
070802	22.0	Marks from the bendler were very visible after powder coating. R.C. area not ground enough	 05/04/12	See NCR 200 for re-work instructions	 07/08/14	 07/08/14	 05/04/12	 070802

NOTE: Date & initial all entries



Date: Thursday, 12/21/2006 12:02:22 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 30069

Part Number: D350591122

Job Number:



Seq. #:

Machine Or Operation:

Description :

27.0

D22303

Mounting Lug



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

1 D2230-3 Mounting Lug

30993

SP

28.0

D2856400

Abrasion Strip



Comment: Qty.: 0.6000 f(s)/Unit Total : 3.0000 f(s)

Pick:

Packing KitQty Part Number Description Batch

1 D2856-400 7.20" Abrasion Strip

132992

SP

29.0

AN337A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

2 AN3-37A

Bolt

1102339

SP

30.0

AN413A

Bolt



Comment: Qty.: 3.0000 Each(s)/Unit Total : 15.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

3 AN4-13a

Bolt

1104746

SP

31.0

AN960JD10

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

4 AN960JD10

Washer

1104885

SP

32.0

AN960JD416

Washer.



Comment: Qty.: 6.0000 Each(s)/Unit Total : 30.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

6 AN960JD416

Washer

1104215

7/8/14 SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 12/21/2006 12:02:22 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 30069

Part Number: D350591122

Job Number:



Seq. #:

Machine Or Operation:

Description :

33.0

MS21042L3

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

2 MS21042L3 Nut (or -3) M104936

34.0

MS21042L4

Nut



Comment: Qty.: 3.0000 Each(s)/Unit Total : 15.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

3 MS21042L4 Nut (or -4) M102557

35.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

36.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-591-122

Location:

PPP Rev:

37.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN KE	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2351	REV. E SHEET 1 OF 2
DATE 05.11.14		TITLE HIGH FLOAT STEP ASSEMBLY	SCALE NTS
A	95.02.15	NEW ISSUE	
B	97.05.22	END CAPS CHANGED	
C	97.07.23	ADDED BUSHING AND FACING INFO	
D	98.12.17	CHANGED TO BEND, D2850 REPLACES D2357 & D2358, INCORP. DEO 9084	
E	05.11.14	UPDATE FINISHING NOTE	

**D2351 HIGH FLOAT STEP ASSEMBLY PARTS LIST**

Part No.	Description	QTY -041	QTY -042
D2351-041	High Float Step Assembly (LH)	X	
D2351-042	High Float Step Assembly (RH)		X
D2244-55.4	STEP EXTRUSION*	1	1
D2582	STEP LEG ASSEMBLY	1	1
D2673-34	STEP END PLATE	1	1
D2850-1	END BRACKET	1	
D2850-2	END BRACKET		1
MS20600AD4W3	RIVETS	16	16

\*cut per drawing

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 30069

RELEASED  
05.11.28 #

**Copyright © 1995 by DART AEROSPACE LTD**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.